

STATUS OF THE CLAIMS

1. (currently amended) A transgenic plant comprising ~~heterologous~~ a nucleic acid sequence[s] encoding a double stranded ~~nematode~~ RNA ~~sequence~~ targeting for genetic inhibition a nematode embryonic lethal phenotype gene, wherein ~~[said double stranded RNA sequence inhibits the proliferation of]~~ nematodes ingesting said double stranded nematode RNA do not proliferate ~~[sequence]~~.
2. - 6. (cancelled)
7. (withdrawn) The transgenic plant of Claim 1, wherein one of said heterologous nucleic acid sequence[s] is complementary to an RNA sequence selected from the group consisting of nematode Major sperm protein, RNA polymerase II, and Chitin synthase RNA sequences.
8. (withdrawn) The transgenic plant of Claim 7, wherein said heterologous nucleic acid sequences are at least 21 bases in length.
9. (currently amended) Seed[s] from the transgenic plant of Claim 1, wherein said seed comprise said nucleic acid sequence.
- 10 – 13. Canceled
14. (withdrawn) The transgenic plant of Claim 1, wherein double stranded RNA is complementary to a nematode sterile phenotype gene.
15. (currently amended) A vector comprising ~~heterologous~~ a nucleic acid sequences encoding a double stranded ~~nematode~~ RNA sequence targeting for genetic inhibition a nematode embryonic lethal phenotype gene, wherein nematodes ingesting said double stranded nematode RNA do not proliferate, ~~wherein said double stranded RNA sequence inhibits the proliferation of nematodes ingesting said double stranded RNA sequence~~.

16. (currently amended) The vector of Claim 15, wherein said at least one heterologous nucleic acid sequence comprises a sense sequence linked to its complementary antisense sequence, said nucleic acid sequence being ~~heterologous nucleic acid sequences are~~ operably linked to [the same] a plant promoter.

17. (currently amended) The vector of Claim 15, wherein said nucleic acid sequence comprises a sense sequence and its complementary antisense sequence ~~heterologous nucleic acid sequences are~~ separated by a loop sequence.

18. (original) The vector of Claim 16, wherein said promoter is a tissue specific promoter.

19. (original) The vector of Claim 16, wherein said promoter is a constitutive promoter.

20. (currently amended) The vector of Claim 15, wherein said nucleic acid sequence comprises a sense sequence and its complementary antisense sequence each ~~heterologous nucleic acid sequences are~~ operably linked to separate promoters.

21. (withdrawn) The vector of Claim 15, wherein one of said heterologous nucleic acid sequences is complementary to an RNA sequence selected from the group consisting of nematode Major sperm protein, RNA polymerase II, and Chitin synthase RNA sequences.

22. (withdrawn) The vector of Claim 21, wherein said heterologous nucleic acid sequences are at least 21 bases in length.

23. (currently amended) A transgenic plant comprising the [vector] nucleic acid sequence of Claim 15.

24-25. (canceled).

26. (currently amended) A method for controlling nematodes comprising:
[a)] providing a transgenic plant [tissue] comprising a nucleic acid sequence~~heterologous nucleic acid sequences~~ encoding a double stranded [nematode] RNA targeting for inhibition a nematode embryonic lethal phenotype gene,~~and~~
~~— b) —~~ growing said transgenic plant so that said double stranded nematode RNA is expressed in plant tissue;] wherein the proliferation of nematodes feeding on said plant tissue is reduced as compared to nematodes feeding on non-transgenic plant tissue.
27. (original) The method of Claim 26, wherein said nematodes are plant parasitic nematodes.
28. (original) The method of Claim 26, wherein said nematodes are animal parasitic nematodes.
29. (original) The method of Claim 26, wherein said double stranded nematode RNA is orally active to prevent the proliferation of nematodes.
30. (original) The method of Claim 26, wherein said nematodes orally ingest said double stranded nematode RNA.
31. (currently amended) The method of Claim 26, wherein said nucleic acid sequence ~~is~~~~heterologous nucleic acid sequences~~ are located on a vector.
32. (currently amended) The method of Claim 31, wherein said nucleic acid sequence ~~comprises a sense sequence and its complementary antisense sequence~~~~heterologous nucleic acid sequences~~ are operably linked to a plant promoter.
33. (currently amended) The method of Claim [31] 32, wherein said sense sequence and said antisense sequence ~~are~~~~heterologous nucleic acid sequences~~ are operably linked to the same promoter.

34. (currently amended) The method of Claim [31] 32, wherein said promoter is a tissue specific promoter.

35. (currently amended) The method of Claim [31] 32, wherein said promoter is a constitutive promoter.

36. (currently amended) The method of Claim 26, wherein said sense sequence and said antisense sequence ~~are~~ heterologous nucleic acid sequences are separated by a loop sequence.

37. (withdrawn) The method of Claim 26, wherein one of said heterologous nucleic acid sequences is complementary to an RNA sequence selected from the group consisting of nematode Major sperm protein, RNA polymerase II, and Chitin synthase RNA sequences.

38. (currently amended) The method of Claim 26, wherein said nucleic acid sequence ~~is~~ heterologous nucleic acid sequences are at least 21 bases in length.

39. (canceled).

40. (original) The method of Claim 26, wherein said nematodes feeding on said plant tissue are killed.

41. (withdrawn) The method of Claim 26, wherein double stranded nematode RNA is complementary to a sterile phenotype gene.

42. (currently amended) A transgenic plant [~~expressing at least one heterologous~~ comprising a double stranded [nematode] RNA [sequence at a level such that nematodes ingesting said at least one heterologous double stranded nematode RNA sequence exhibit sequences exhibit] causing decreased proliferation of nematodes ingesting said RNA as compared to nematodes feeding on non-transgenic plants, wherein one strand of said RNA sequence is complementary to a nematode embryonic lethal phenotype gene.

43. (canceled).